

**Figure 1**

1                   1.                   An apparatus for encrypting an identifier, the  
2   apparatus comprising:  
3                   a pad for entering an identifier;  
4                   a circuit, adjacent the pad, for encrypting the entered  
5   identifier; and  
6                   a link, communicatively coupling the pad and the encrypting  
7   circuit.

1                    2.     The apparatus of claim 1,  
2     wherein the pad comprises  
3                    a touch pad.

1                    3.     The apparatus of claim 2,  
2     wherein the touch pad comprises  
3                    an N-wire-technology touch pad.

1                    4.     The apparatus of claim 2,  
2     wherein the touch pad comprises  
3                    a four-wire-technology touch pad.

1                    5.     The apparatus of claim 2,  
2     wherein the touch pad comprises  
3                    a seven-wire-technology touch pad.

1                   6.     The apparatus of claim 1.  
2     wherein the pad comprises  
3                   a touch screen.

1                    7.     The apparatus of claim 1,

2 wherein the pad comprises

3 a pad for entering a personal identifier (PIN).

1           8.     The apparatus of claim 1, wherein the encrypting  
2     circuit comprises

3 a CPU; and

4 a memory, coupled to the CPU and programmed to encrypt.

1           9.     The apparatus of claim 8, wherein the CPU and  
2     programmed memory are the first CPU, programmable to encrypt the entered  
3     identifier, through which the identifier passes.

1            10. The apparatus of claim 1, wherein the encrypting  
2 circuit comprises

3 a microcontroller programmed to encrypt.

1            11. The apparatus of claim 1, wherein the encrypting  
2 circuit comprises

3 an application-specific integrated circuit (ASIC).

1           12. The apparatus of claim 1, further comprising  
2           a housing enclosing the encrypting circuit and link and  
3           resistant to access.

1                    13.    The apparatus of claim 12, wherein the housing  
2 comprises

3 housing resistant to tampering.

1                    14.    The apparatus of claim 12, wherein the housing  
2 comprises

3 housing resistant to tapping.

1                    15.    The apparatus of claim 12, wherein the housing  
2 comprises  
3                    housing at least partially of chip-on-glass technology.

1                    16.    The apparatus of claim 12, wherein the housing  
2   comprises  
3                    housing in which the encrypting circuit is embedded.

1                    17.    The apparatus of claim 12, wherein the housing  
2   comprises  
3                    housing in which the link and encrypting circuit are  
4                    embedded.

1                   **18.** An apparatus for encrypting an identifier, the  
2 apparatus comprising:  
3                   a pad, comprising one of a touch screen and an N-wire-  
4 technology touch pad, for entering a personal identifier (PIN);  
5                   a circuit, adjacent the pad and comprising one of a  
6 programmed microcontroller and an ASIC, for encrypting the entered  
7 identifier;  
8                   a link, communicatively coupling the pad and the encrypting  
9 circuit; and  
10                  a housing, resistant to access and at least partially of  
11 chip-on-glass technology, in which the link and encrypting circuit  
12 are embedded.

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1          19.  A method for encrypting an identifier, the method
2 comprising:
3     placing a
4           pad for entering an identifier,

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5 a circuit for encrypting an identifier and  
6 a link communicatively coupling the pad and the  
7 encrypting circuit  
8 adjacent in an access-resistant housing;  
9 entering a identifier on the pad;  
10 communicating the identifier to the encrypting circuit; and  
11 encrypting the identifier by means of the encrypting circuit.

1 20. The method of claim 19, further comprising the step of  
2 forwarding the encrypted identifier for verification.

1 21. An apparatus for encrypting an identifier, the  
2 apparatus comprising:  
3 a pad for entering an identifier;  
4 a circuit for encrypting the entered identifier, the circuit  
5 being the first circuit receiving and programmable or designed to  
6 encrypt the entered identifier;  
7 a link, communicatively coupling the pad and the encrypting  
8 circuit; and  
9 a housing, shielding the link and circuit from physical  
10 access.

1 22. The apparatus of claim 21, wherein the circuit  
2 comprises  
3 a circuit adjacent the pad.